ABSTRACT OF THE DISCLOSURE

The present invention relates generally to an oral drug delivery system which incorporates a therapeutic bioactive agent with biodegradable calcium phosphate particles, the particles then encapsulated by casein. The resulting particles provide a carrier designed to protect the therapeutic agent in the harsh, acidic environment of the stomach before releasing the agent into the small intestine. The therapeutic agent may be any therapeutically effective agent, such as a natural isolate or synthetic chemical or biological agent, such as a therapeutic agent, and in particular, may be a protein or a peptide such as insulin. Also incorporated with the particles may be additional surface modifying agents to assist binding, controlled release, or to otherwise modify the particles. The particles generally support the therapeutic agent to form controlled- or sustained-release particles for the oral or mucosal delivery of the therapeutic agent over time, wherein the therapeutic agent is incorporated into the structure of the particle core, disposed on the surface of the particle, or both.